

Appl. No. 09/982,544
Amdt. date September 8, 2005

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1-16. (canceled)
- 1 17. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 said particles deliver said agent into the bloodstream of said subject.
- 1 18. (canceled)
- 1 19. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the aerogel ~~particle contains~~ particles contain pores of about 1 to 100 nm.
- 1 20. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the aerogel ~~particle has~~ particles have a surface area of about 100 to 1,200 m²/g.
- 1 21. (canceled)
- 1 22. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the aerogel ~~particle has~~ particles have a particle size of about submicron up to about 3 microns.
- 1 23. (New) The ~~powder of claim 1~~ method of claim 29, wherein the aerogel
2 ~~particle is~~ particles are a carrier selected from the group consisting of sugars and carbohydrates.
- 1 24. (canceled)
- 1 25. (canceled) The ~~powder of claim 1~~ method of claim 29, wherein said powder
2 is prepared by the steps of (i) preparing porous gels of a carrier material which is soluble in
3 pulmonary surfactant; (ii) soaking the porous gels in a solution of the therapeutic agent; (iii)
4 removing the solvent and forming aerogels by supercritical drying; and (iv) converting the
5 aerogels into powder.

Appl. No. 09/982,544
Amdt. date September 8, 2005

PATENT

1 26. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the therapeutic agent is insulin.

1 27. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the therapeutic agent is methadone.

1 28. (Currently amended) The ~~powder of claim 1~~ method of claim 29, wherein
2 the therapeutic agent is naltrexone.

1 29. (Currently amended) A method of treating a disease state responsive to
2 treatment by a therapeutic agent comprising pulmonarily administering to the alveoli of a subject
3 in need thereof a dispersible dry powder according to claim 1 comprising
4 a therapeutically effective amount of a therapeutic agent in aerogel particles
5 wherein said particles have a density of about 0.1 to 0.001 g/cc and particle size to permit them
6 to reach the alveoli of a human subject's lungs upon inhalation.

1 30. (Previously presented) The method of claim 29, wherein the powder is
2 prepared from an aerogel prepared by supercritical drying at a temperature of less than 40°C.

1 31. (Previously presented) The method of claim 30, wherein the powder is
2 prepared from an aerogel prepared by co-gelling the therapeutic agent with a gel-forming
3 material selected from the group consisting of sugars and carbohydrates.

1 32-35. (canceled)

1 36. (Currently amended) A method of delivering a therapeutic agent to a
2 subject, said method comprising administering to the alveoli of said subject a dispersible dry
3 powder according to claim 1 comprising a therapeutically effective amount of said therapeutic
4 agent in aerogel particles wherein said particles have a density of about 0.1 to 0.001 g/cc and
5 particle size to permit them to reach the alveoli of a human subject's lungs upon inhalation as an
6 inhalant.

1 37. (Currently amended) A method of delivering a therapeutic agent to the
2 bloodstream of a subject, said method comprising administering to the alveoli of said subject a

Appl. No. 09/982,544
Amdt. date September 8, 2005

PATENT

3 dispersible dry powder ~~according to claim 1~~ comprising a therapeutically effective amount of
4 said therapeutic agent and aerogel particles wherein said particles have a density of about 0.1 to
5 0.001 g/cc and particle size to permit them to reach the alveoli of a human subject's lungs upon
6 inhalation as an inhalant.

1 38. (canceled)

1 39. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 said agent is adsorbed onto the structure of said particles.

1 40. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 said particles are directly prepared from said therapeutic agent.

1 41. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 the structure of said particles comprise said therapeutic agent.

1 42. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 said powder is formulated for quick introduction into the bloodstream and controlled release
3 thereafter.

1 43. (Currently amended) The ~~powder of claim 1~~ method of claim 29 wherein
2 the powder is formulated for slow release.

1 44. (canceled)

1 45. (New) The method of claim 36, wherein the powder is prepared from an
2 aerogel prepared by supercritical drying at a temperature of less than 40°C.

1 46. (New) The method of claim 36, wherein the powder is prepared from an
2 aerogel prepared by co-gelling the therapeutic agent with a gel-forming material selected from
3 the group consisting of sugars and carbohydrates.

1 47. (New) The method of claim 36, wherein the aerogel particles contain
2 pores of about 1 to 100 nm.

Appl. No. 09/982,544
Amdt. date September 8, 2005

PATENT

1 48. (New) The method of claim 36, wherein the aerogel particles have a
2 surface area of about 100 to 1,200 m²/g.

1 49. (New) The method of claim 36, wherein the aerogel particles have a
2 particle size of about submicron up to about 3 microns.

1 50. (New) The method of claim 36, wherein the aerogel particles are a carrier
2 selected from the group consisting of sugars and carbohydrates.

1 51. (New) The method of claim 36, wherein the therapeutic agent is insulin.

1 52. (New) The method of claim 36, wherein the therapeutic agent is
2 methadone.

1 53. (New) The method of claim 36, wherein the therapeutic agent is
2 naltrexone.